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**United States Patent** [19]

Fujii et al.

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[54] **LIQUID CRYSTAL DISPLAY WITH SUBSTANTIALLY EQUAL RESISTANCES FOR SETS OF TERMINAL ELECTRODES AND INCLINED WIRING ELECTRODES**

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**[30] Foreign Application Priority Data**

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[51] Int. Cl.<sup>6</sup> ..... **G02F 1/1345; G02F 1/1343**

[52] U.S. Cl. .... **349/149; 349/143; 349/150; 349/152**

[58] Field of Search ..... **349/143, 152, 349/150, 149**

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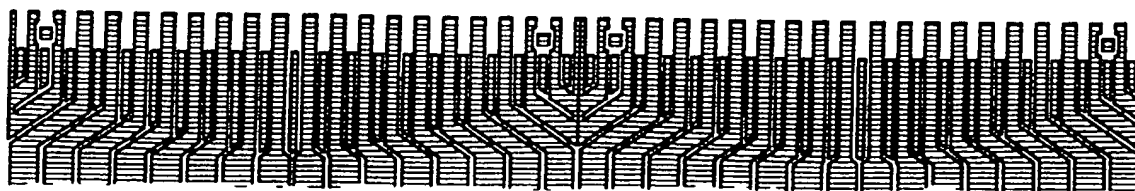
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**[57] ABSTRACT**

A liquid crystal display including a plurality of parallel display electrodes wired over an electrode substrate, terminals for the display electrodes led out to the end portion of the electrode substrate and connected to TCPs, the terminals having pitches smaller than those of the display electrodes, and leadout wirings for connecting the display electrodes and the terminals. The leadout wirings each consist of a portion extending from a respective display electrode as it is, a portion extended from the respective terminals as it is, and almost parallel, inclined linear wiring that connects the two extended portions. The length of the two extended portions and the width of the inclined linear wiring are adjusted so that the wiring resistances of the individual leadout wirings are substantially equal.

**24 Claims, 27 Drawing Sheets**



# **ABSTRACT**

A liquid crystal display including a plurality of parallel display electrodes wired over an electrode substrate, terminals for the display electrodes led out to the end portion of the electrode substrate and connected to TCPs, the terminals having pitches smaller than those of the display electrodes, and leadout wirings for connecting the display electrodes and the terminals. The leadout wirings each consist of a portion extending from a respective display electrode as it is, a portion extended from the respective terminals as it is, and almost parallel, inclined linear wiring that connects the two extended portions. The length of the two extended portions and the width of the inclined linear wiring are adjusted so that the wiring resistances of the individual leadout wirings are substantially equal.